XR-C520

SERVICE MANUAL

US Model

Model Name Using Similar Mechanism	XR-C410
Tape Transport Mechanism Type	MG-50C2-39

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
12 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1% total harmonic distortion.

Other Specifications

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 20,000 Hz
Signal-to- noise ratio	

Cassette type	Dolby B NR	Dolby NR off
TYPE II, IV	67 dB	61 dB
TYPE I	64 dB	58 dB

Tuner section

FM

Tuning range	87.5 – 107.9 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.5 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	30 μV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	30 W × 4 (at 4 ohms)

General

Output lead	Power antenna relay control lead Power amplifier control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 186 × 57 × 170 mm ($7\,^3/_8 \times 2\,^1/_4 \times 6\,^3/_4$ in.) (w/h/d) not incl. projecting parts and controls
Mounting dimension	Approx. 182 × 53 × 153 mm ($7\,^1/_4 \times 2\,^1/_8 \times 6\,^1/_8$ in.) (w/h/d) not incl. projecting parts and controls
Mass	Approx. 1.3 kg (2 lb. 14 oz.)
Supplied accessories	Power connecting cord (1) Mounting hardware (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/AM CASSETTE CAR STEREO

SONY®

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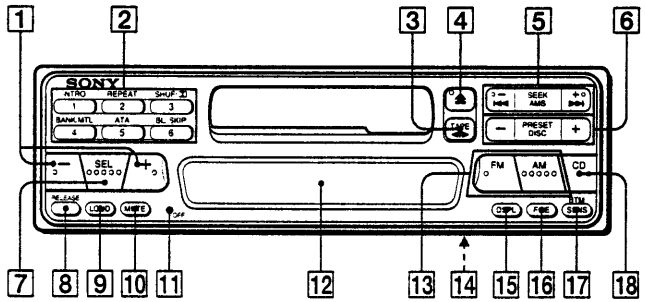
Button Locations



Refer to the pages in ● for details.

EN EN

1 (volume/bass/treble/balance/fader control) button ❻❿⓭⓮

2 During radio reception:
Preset number buttons ❾

During tape/CD playback:

INTRO button ❽❿⓫⓬

REPEAT button ❽⓫⓬

SHUF/DD (Dolby B NR) button ❼⓬

BANK/METAL button ❼⓯

ATA (Automatic Tuner Activation) button ❽⓮

BL.SKIP button ❽❿

3 TAPE/◀II▶ (playback/transport direction change) button ❼

4 ⏏ (eject) button ❼❿

5 SEEK/AMS button ❼❽⓫⓮

6 PRESET/DISC button ❼❽❾⓫⓭

7 SEL (control mode select) button ❻❿⓭⓮⓯

8 RELEASE (front panel release) button ❺

9 LOUD (loudness) button ❿

10 MUTE button ❿

11 OFF button ❻❼❿

12 Display window

13 (radio on/band select) button ❼❽❾

14 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the installation/Connections manual.

15 DSPL (display mode change/time set) button ❻⓭

16 FILE (custom file mode select • set) button ⓭⓮

17 SENS/BTM (Sensitivity adjust/Best Tuning Memory Function) button ❽❾

18 CD (disc play/CD changer select) button ❼⓫⓭

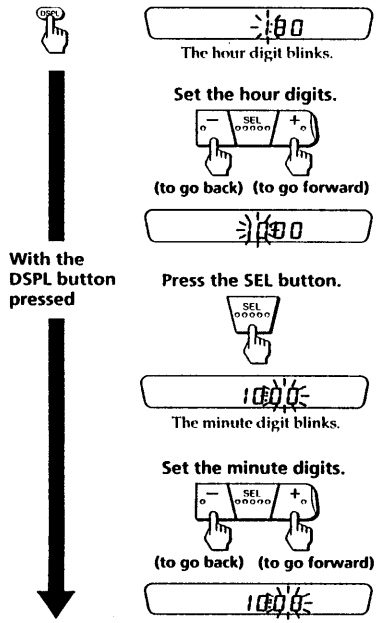
Setting the Clock

The clock has a digital indication.

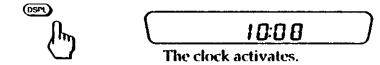
For example, setting it to 10:08

1 Display the time.
(Press the OFF or the DSPL button during the unit operation.)

2 Press the DSPL button for more than two seconds.


The hour digit blinks.
Set the hour digits.
(to go back) (to go forward)
With the DSPL button pressed
Press the SEL button.
The minute digit blinks.
Set the minute digits.
(to go back) (to go forward)

3 Release the DSPL button.



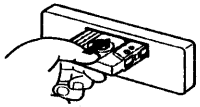
SECTION 1
GENERAL

This section is extracted from instruction manual.

Cassette Player Operation

Listening to Tape Playback

After inserting the cassette, playback will start automatically.



If a cassette is already inserted, press the [TAPE] button to start playback.
If you press during playback, the tape transport direction will change.

Indication of Tape Transport Direction

The side facing up is being played.

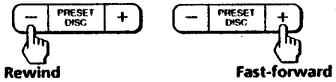
The side facing down is being played.

To stop playback,
eject the cassette by pressing the [⏏] button or press the OFF button.
Playback stops also when you select another source (radio, CD) by pressing the [FM], [AM] or [CD] button.

Ejecting the Cassette

Press the [⏏] button.

Fast-winding the Tape



Rewind **Fast-forward**

To start playback during rewinding or fast-forwarding, press the [TAPE] button.

Playing a Tape Recorded in the Dolby B NR System

Press the [3] button when you want to listen to a tape recorded in the Dolby B NR system. → "DD" appears on the display.
To cancel, press again.

Playing a CrO_2 or Metal Tape

Press the [4] button when you want to listen to a CrO_2 (TYPE II) or metal (TYPE IV) tape. → "MTL" will appear on the display.
To cancel, press again.

Locating the Beginnings of the Tracks

— AMS (Automatic Music Sensor) Function

During playback, press either side of the SEEK/AMS button the number of times you wish to skip the tracks.

To locate the previous tracks **To locate the succeeding tracks**

Up to nine tracks can be skipped.

If the blanks between the tracks are shorter than four seconds, or if there are noises, the AMS function will not work. Also, the unit may read long sections of low volume music or quiet sections on a track as blanks between tracks.

Searching the Desired Track

— Intro Scan Function

Press the [1] button during playback. → "INTRO" appears on the display.
The first 10 seconds of all the tracks are played. When you find the desired track, press the button once more. The unit returns to the normal playback mode.

Playing Tracks Repeatedly

— Repeat Play Function

Press the [2] button during playback. → "REP" appears on the display.
When the currently played track is over, it will be played again from the beginning.
To cancel this mode, press the button again.

Radio Reception during Fast-forwarding or Rewinding of a Tape

— ATA (Automatic Tuner Activation) Function

Press the [5] button during playback. → "ATA" appears on the display.
When fast-forwarding or rewinding with the [PRESET DISC] button, the tuner will turn on automatically.

Skipping Blanks Automatically during Tape Playback

— Blank Skip Function

Press the [6] button during playback. → "BL.SKIP" appears on the display.
Blanks longer than eight seconds will be automatically skipped during tape playback.

Radio Reception

Searching for the Stations Automatically

— Automatic Tuning

1 Select the desired band.

FM1 → FM2 → FM3 → FM1

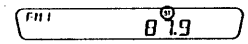
AM1 ⟷ AM2

2 Press either side of the SEEK/AMS button to search for the station (automatic tuning).

For lower frequencies **For higher frequencies**

The scanning stops when a station is received. Press either side of the button repeatedly until the desired station is received.

When an FM stereo program with a sufficient signal strength is tuned in,



The "ST" indication will appear.

To avoid the automatic tuning from stopping on stations too frequently (local seek mode), press the [SENS] button momentarily to get the "LCL" indication.
Only the stations with relatively strong signals can be tuned in. The local seek mode functions only when the automatic tuning is in operation.

If FM Stereo Reception is Poor — Monaural Mode

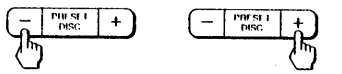
Press the [SENS] button momentarily. → "MONO" appears on the display.
The sound will improve, but it will become monaural.

Tuning in by Adjusting the Frequency

— Manual Tuning

1 Select the desired band.

2 Press and hold either side of the PRESET/DISC button.
Release the button when the desired station is received.



For lower frequencies

For higher frequencies

PREVENTING ACCIDENTS!
When tuning in during driving, use the automatic tuning and the memory preset tuning instead of the manual tuning.

Memorizing Stations Automatically

— BTM (Best Tuning Memory) Function

This function selects from the currently received band the stations with the strongest signals and memorizes them in order of their frequency.

1 Select the desired band.

2 Press the BTM button for more than two seconds.
- When there is no preset number indicated on the display window, stations will be stored on all preset number buttons on the currently selected band.
- When there is a preset number indicated on the display window, the unit will store stations on all preset number buttons from the one currently displayed.

For example, when you select FM2 and preset number 3 is displayed,
the operation will start from preset number 3 on FM2, and will stop at preset number 6 on FM3.

Memorizing Only the Desired Stations

1 Select the desired band.

2 Tune in the station which you wish to store on the preset number button.

3 Keep the desired preset number button (INTRO 1 to BL SKIP 6) pressed for about two seconds until you hear a beep tone.

The number of the pressed preset number button appears on the display window.

Up to 6 stations on each band (FM1, FM2, FM3, AM1 and AM2) can be stored on the preset number buttons in order of your choice. Therefore, 18 stations can be memorized on FM.
If you try to store another station on the same preset number button, the previously stored station will be erased.

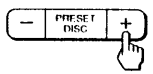
Receiving the Memorized Stations

1 Select the desired band.

2 Press momentarily the preset number button on which the desired station is stored.

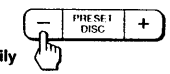
Note
If you press the preset number button for more than two seconds, the currently received station will be memorized again. To receive the previously memorized station, make sure that the preset number button is pressed only momentarily.

Press either side of the PRESET/DISC button momentarily to receive in order the stations stored in the memory (Preset Search Function).



Press momentarily

1 → 2 → ... → 5 → 6 → 1 → ...



Press momentarily

1 → 6 → 5 → ... → 2 → 1 → ...

Other Functions

Adjusting the Sound Characteristics

1 Select the item you want to adjust by pressing the SEL button repeatedly.
VOL (volume) → BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader) → VOL (volume)

2 Adjust the selected item by pressing either the + or − button.

Adjust within three seconds after selecting. (After three seconds the button will again serve as volume control button.)

Enjoying Bass and Treble even at Low Volume

— Loudness Function

Press the LOUD button. → "LOUD" will appear on the display.
Bass and treble will be reinforced. To cancel, press again.

Muting the Sound Quickly

— Mute Function

Press the MUTE button. → The "MUTE" indication flashes.
The sound is muted at once. To restore the previous volume level, press again.

This function will be also canceled when:
— the + or OFF button is pressed.
— ejecting a cassette by pressing the ⏏ button during tape playback.

Changing the Illumination Color

Press the INTRO 1 button while pressing the SEL button.
You can chose the color between amber and green.

Muting the Beep Tone

Press the BL SKIP 6 button while pressing the SEL button.
To obtain the beep tone again, press these buttons once more.

CD Changer Operation

with the optional CD changer(s) connected

Playing a CD

Press the ▷ button.
CD playback starts.

Locating the Beginnings of the Tracks

— AMS (Automatic Music Sensor) Function

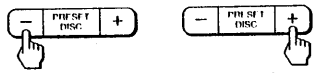
During playback, press either side of the SEEK/AMS button the number of times you wish to skip the tracks.

To locate the previous tracks

To locate the succeeding tracks

Locating the Desired Part of a Track — Manual Search

During playback, press and hold either side of the PRESET/DISC button. Release the button when you have found the desired part.

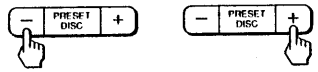


To reverse

To forward

Changing CDs

During playback, press either side of the PRESET/DISC button momentarily.



To return to the previous CD

To advance to the next CD

Selecting CD Changers

(with several CD changers connected)

Press the ▷ button during CD playback.
Each time you press, another CD changer will be selected.

Searching for the Desired Track — Intro Scan Function

Press the INTRO (1) button during playback.
→ "INTRO" appears on the display.
The first 10 seconds of all the tracks on the currently selected disc are played in order. After the first disc is over, the next CD is played. When two or more CD changers are connected, after the last disc is played, CD playback moves on to the next CD changer.

When you find the desired track, press again . The unit returns to the normal CD playback mode.

Playing Repeatedly

— Repeat Play Functions

Playing the currently selected track repeatedly
— Track repeat

Press the REPEAT (2) button during CD playback to get the "REP 1" indication.

Playing the currently selected disc repeatedly
— Disc repeat

Press the REPEAT (2) button during CD playback to get the "REP 2" indication.

continue to next page →

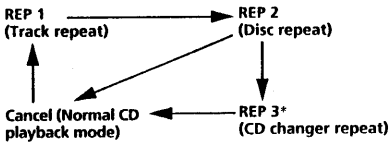
When the last track on the currently selected disc is over, CD playback is repeated from the beginning of that disc.

Playing the discs in the currently selected CD changer repeatedly
— CD changer repeat (when two or more CD changers are connected)

Press the REPEAT (2) button during CD playback to get the "REP 3" indication.

When the last disc in the currently selected CD changer has been played, CD playback will be repeated from the first CD in this changer.

The function of the REPEAT (2) button changes cyclically as follows:



** CD changer repeat (REP 3) mode functions only when two or more CD changers are connected to the unit. When only one CD changer is connected, the "REP 3" indication will not be displayed. In case you press the REPEAT (2) button again while the "REP 2" indication is being displayed, the repeat mode will be canceled.*

Playing Tracks Randomly

— Shuffle Play Functions

Playing the tracks on the currently selected disc randomly
— Disc shuffle play

Press the SHUF (3) button during CD playback to get the "SHUF 1" indication.

All tracks on the currently selected CD are played in random order. After each track has been played once, shuffle play will continue with the next CD.

Playing each track on each CD in the currently selected CD changer randomly
— CD changer shuffle play

Press the SHUF (3) button during CD playback to get the "SHUF 2" indication.

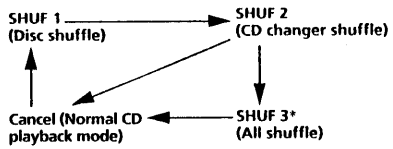
All tracks on each CD in the currently selected CD changer are played in random order.

Playing each track on each CD in all connected CD changers randomly
— All shuffle play (when two or more CD changers are connected)

Press the SHUF (3) button during CD playback to get the "SHUF 3" indication.

All tracks on each CD in each CD changer connected are played in random order.

The function of the SHUF (3) button changes cyclically as follows:



** The all shuffle (SHUF 3) mode functions only when two or more changers are connected to the unit. When only one changer is connected, "SHUF 3" indication will not be displayed. In case you press the SHUF (3) button again while "SHUF 2" is displayed, the shuffle play will be canceled.*

If you press the INTRO (1) button during shuffle play, the first 10 seconds of all tracks will be played randomly.

CD Custom File Function

with the optional CD changer(s) connected

When (a) CD changer(s) with custom file feature* is (are) connected, you can display the customized titles (Disc Memo Function) and play selected tracks (Bank Function) on the discs.
These settings are stored in the memory of the CD changer. Therefore, even if you take a custom filed disc out of the CD changer, you can still use the same custom file function the next time you play that disc in the same CD changer. (You can register the customized titles and the PLAY/SKIP settings on up to 110 discs** per CD changer.)

* *If your system has several CD changers connected, you can play that disc in another CD changer and can still use the same custom file function, provided that the CD changers are inter-connected with the Bus (Unilink) cables.*

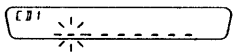
** *If you try to register more than 110 discs, the unit will display the "FULL" indication and will not accept the command for custom -filing. In this case, you will have to erase other discs from the CD changer memory before you enter the new ones.*

Putting Your Personalized Titles onto the Discs

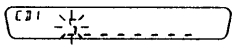
— Disc Memo Function

1 Play the disc that you wish to title (page 11).

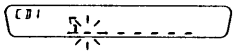
2 Press the FILE button for more than two seconds.
Enter the name edit mode.



3 Press either the ◁ or ▷ button to select the desired characters.



4 Press the SEL button after locating the desired character.



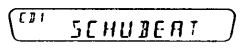
The flashing part moves to the next space on the right. Repeat steps 3 and 4 to enter the entire title. Up to eight characters can be used per disc.

Notes
- *If you press the SEL button when the eighth character (farthest right character) is flashing, the flashing part goes back to the first character (farthest left character).*
- *If you wish to put a blank space after a character, select "_" (under bar).*

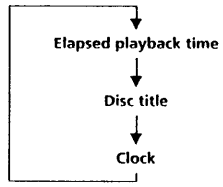
5 Ⓐ To return to the normal CD play mode,
— press the FILE button for more than two seconds.
— press the CD button to select the next CD changer (when two or more CD changers are connected).
Ⓑ To continue to the put titles onto the discs,
press either side of the − PRESET DISC + button momentarily to another disc.

Displaying the Registered Titles — Disc Memo Function

Press the DISPL button during CD playback.

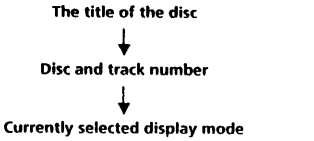


Each time you press the DISPL button during CD playback, the display on the display window changes as follows:



continue to next page →

Title display modes
While loading the discs, whatever display mode the unit is in, the indication on the display window automatically changes as follows:



Changing a Registered Title — Disc Memo Function

Play the disc whose title you wish to change, and perform steps 2 to 5 to enter the name edit mode.

Erasing a Registered Title

— Disc Memo Function

1 Select the CD changer and play any disc.

2 Press the FILE button for more than two seconds.
Enter the name edit mode.

3 Press the 5 button while pressing the SEL button.

4 Press either the ◁ or ▷ button to select the title that you wish to erase.

5 Press the SEL button for more than two seconds.
Now, the title and the PLAY/SKIP settings of the bank function are erased.
Repeat step 4 and step 5 if necessary.

6 Press the FILE button for more than two seconds.
The unit returns to the normal CD playback mode.

The alternative method to erase a title
You can erase a title by selecting eight "_"s (under-bar) as described in step 3 of "Putting Your Personalized Titles onto the Discs" (page 13).

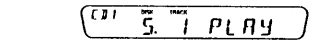
Setting the Play and Skip Modes on the Discs

— Bank Function

1 Play the disc to which you wish to set these modes.

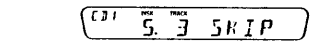
2 Press the FILE button for more than two seconds
Enter name edit mode.
See page 13 for details about registering a title. If the title has already been registered, go to step 3.

3 Press the FILE button momentarily.
Enter the PLAY/SKIP edit mode.



Note
When the title is not registered, you cannot enter the PLAY/SKIP edit mode even if you press the FILE button.

4 Press either side of the ⏮ SEEK/MAN ⏭ button to select the track number you wish to skip and press the SEL button.



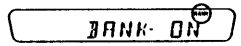
The indication changes from "PLAY" to "SKIP". If you wish to return to "PLAY", press the SEL button again.
Repeat the operation in this step to set either the "PLAY" or "SKIP" mode on all the tracks.

Note
You can set the "SKIP" mode only onto up to 24 tracks. If a disc has more than 24 tracks, you will not be able to set the "SKIP" mode on the tracks after the 24th track.

5 Press the FILE button for more than two seconds.
The unit returns to the normal CD playback mode.

Playing Selected Tracks on the Discs — Bank Function

Press the (4) button. → The "BANK" indication appears on the display window.



The unit starts playing the tracks with "PLAY" settings which have been set by the PLAY/SKIP edit mode.

To cancel, press it again.

Playing the tracks with "SKIP" settings

Press the (4) button while pressing the SEL button.

The unit starts playing the tracks with "SKIP" settings which have been set by the PLAY/SKIP edit mode.

To go back to the normal playing mode, press the (4) button again while pressing the SEL button.

Note

Even when you play a disc with the PLAY/SKIP settings, if the "BANK" indication has not appeared on the display window, the disc will not be played according to the settings.

Maintenance

Fuse Replacement

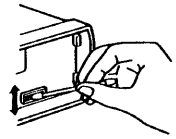
When replacing the fuse, be sure to use one with the correct amperage which is stated on the fuse case. Never use a fuse whose amperage rating exceeds the one supplied to the unit as this could cause a malfunction of the unit.

Warning

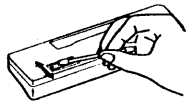
Use a fuse with the specified amperage.
Use of a fuse with higher amperage may cause serious damage.

Cleaning the Connectors

The unit may not function properly if the connectors between the unit and the front panel are not clean. In order to prevent this, open the front panel by pressing the RELEASE button, then detach it and clean the connectors with a cotton swab as illustrated. Be sure to clean them vertically, otherwise you could damage the connecting points.



Main unit



Back of the front panel

Error displays (with the operational CD changer(s) connected)

The following indications will flash for about five seconds and an alarm sound will be heard.

Display	Cause	Solution
NO MAG	The disc magazine is not inserted in the CD changer.	Insert the disc magazine with discs into the CD changer.
NO DISC	No disc is inserted in the disc magazine.	Take out the magazine and insert the discs.
ERROR	The disc is dirty.	Clean the disc.
	The disc is inserted upside down.	Insert the disc correctly.
RESET	The CD changer cannot be operated because of some problem.	Press the reset button of the unit.

If the above-mentioned solutions do not help to improve the situation, consult your nearest Sony dealer.

Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**

When the Unit is Used in a Car with No Accessory Position on the Ignition Key

— POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear **if the unit is used in a car with no accessory position on the ignition key.** To avoid this battery wear when using the unit in such a car, **set the POWER SELECT switch located on the bottom of the unit to the OFF position, then press the reset button.** The illumination is reset to stay off while the unit is not being played.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the OFF position.

Connexions

Précautions

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Avant d'effectuer les connexions, débrancher la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Brancher les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres branchements.
- Veiller à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoire.
- **Rassembler tous les fils de terre en un point de masse commun.**

Si l'appareil est utilisé dans une voiture dont la clé de contact n'a pas de position accessoire

— Interrupteur POWER SELECT

L'éclairage du panneau avant est réglé en usine de manière à s'allumer même quand l'appareil ne fonctionne pas. Cependant, ce réglage risque d'épuiser la batterie **si l'appareil est utilisé dans une voiture dont la clé de contact ne possède pas de position accessoire.** Pour éviter d'épuiser la batterie, régler l'interrupteur **POWER sur le socle de l'appareil sur OFF, puis appuyer sur la touche de réinitialisation.** L'éclairage est réglé pour rester éteint quand l'appareil n'est pas utilisé.

Remarque

Quand l'interrupteur POWER SELECT est réglé sur OFF, l'avertisseur du panneau avant ne fonctionne pas.

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Antes de realizar las conexiones, desconecte el conductor de puesta a masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte los cables conectores de alimentación **amarillo** y **rojo** solamente después de haber conectado los demás.
- Cerciórese de conectar el cable conector de alimentación rojo a un terminal de 12 V positivo que se energice al poner la llave de encendido en la posición para accesorios.
- **Conecte todos los conductores de puesta a masa a un punto común.**

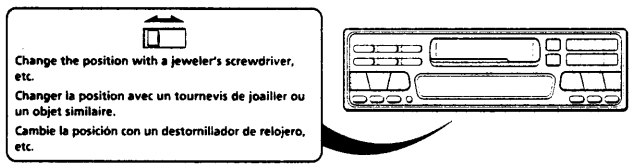
Empleo de la unidad en un automóvil con llave de encendido sin posición para accesorios

— Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada incluso aunque la unidad no se encuentre en reproducción. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil **si la unidad se utiliza en un automóvil sin posición para accesorios en la llave de encendido.** Para evitar esto, **ponga el selector POWER SELECT situado en la base de la unidad en la posición OFF, y después presione el botón de reposición.** La iluminación estará desactivada cuando la unidad no se encuentre en reproducción.

Nota

La alarma de precaución no se activará cuando el selector POWER SELECT se encuentre en la posición OFF.

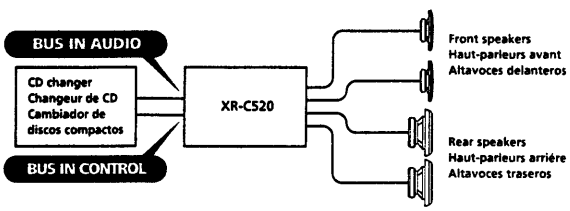

Change the position with a jeweler's screwdriver, etc.
Changer la position avec un tournevis de joailler ou un objet similaire.
Cambie la posición con un destornillador de relojero, etc.

Connection Diagram

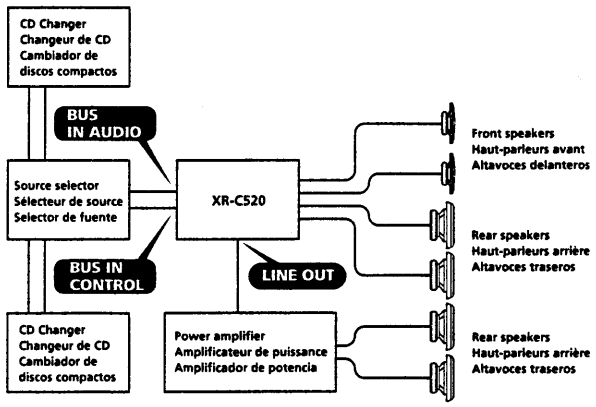
Schémas de connexion

Diagrama de conexiones

Example 1/Exemple 1/Ejemplo 1

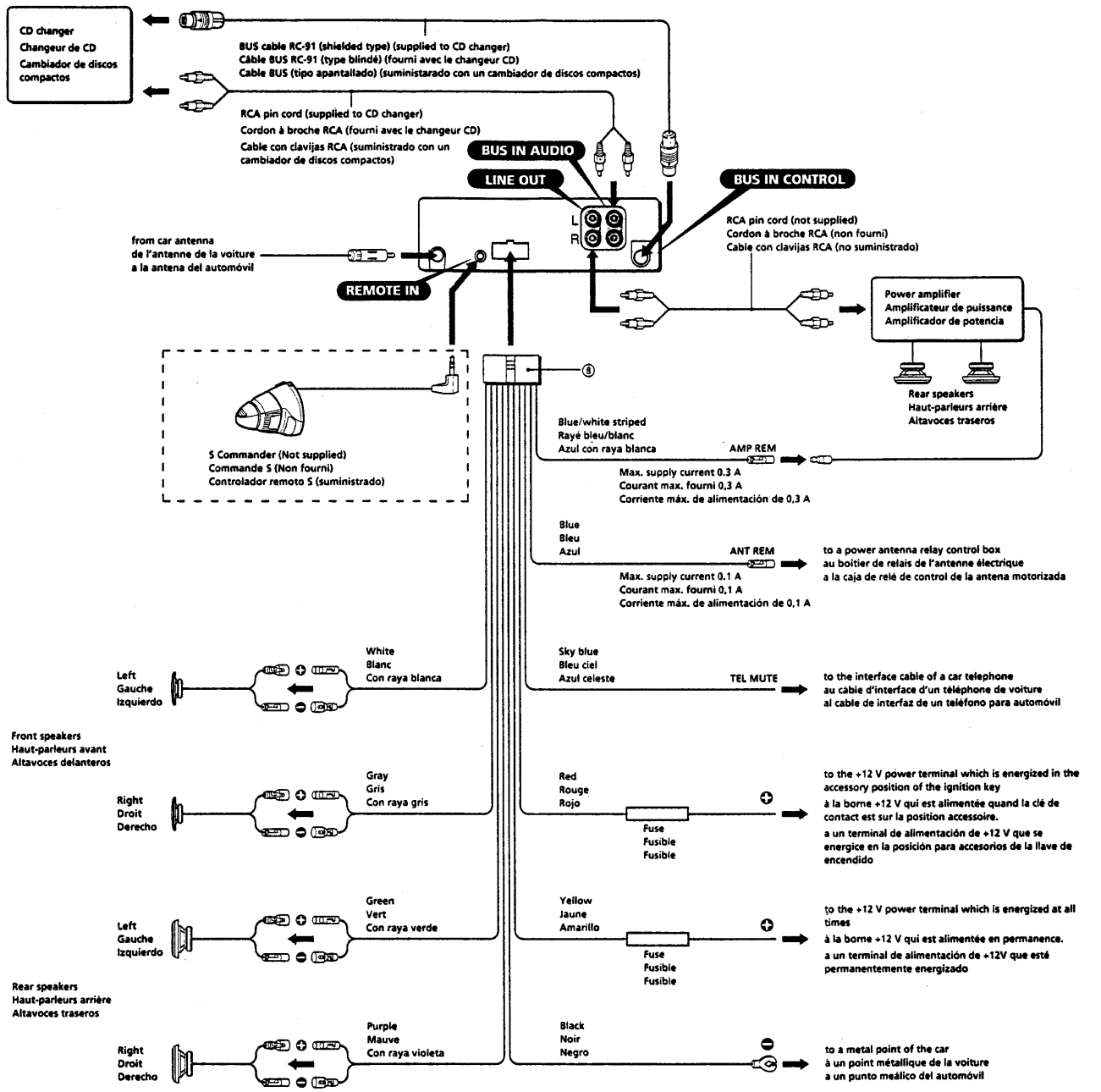


Example 2/Exemple 2/Ejemplo 2



If you connect two or more CD changers, the source selector XA-U20 or XA-U40 is required.
Vous devrez utiliser le sélecteur de source XA-U20 or XA-U40, si vous raccordez au moins deux changeurs.
Cuando desee conectar dos o más cambiadores de discos compactos, necesitará un selector de fuente XA-U20 o XA-U40.

Connections of Example — Connexions de l'exemple — Ejemplo de conexiones



Notes on the control leads

- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation) function.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Remarques sur les fils de contrôle

- *Le fil de contrôle de l'antenne électrique (bleu) fournit du courant continu de +12 V quand le tuner est mis sous tension ou quand la fonction ATA (Automatic Tuner Activation) est activée.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

Connexion pour la conservation de la mémoire

Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur la connexion des haut-parleurs

- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Ne pas raccorder des haut-parleurs actifs (avec amplificateurs intégrés) aux bornes de haut-parleur de l'appareil sous peine de les endommager. Veiller à raccorder des haut-parleurs passifs à ces bornes.*

Notas sobre conductores de control

- *El conductor de control de la antena motorizada (azul) suministrará +12 V CC cuando conecte la alimentación del sintonizador o cuando active la función de activación automática del sintonizador (ATA).*
- *Con esta unidad no podrá emplearse una antena motorizada desprovista de caja de relé.*

Conexión para protección de la memoria

Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición OFF.

Notas sobre la conexión de los altavoces

- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 Ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificador incorporado) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*